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Speech-Language Pathology Students' Motivation for Learning

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Speech-Language Pathology Students' Motivation for Learning

Abstract

The primary purpose of this exploratory study was to attempt to gain a better understanding of speech-language pathology students' motivations for learning. Motivation was assessed in undergraduate and graduate students in two categories of coursework. Results showed statistically significant differences between undergraduate and graduate students in the overall areas of Intrinsic and Extrinsic Motivation, while there were no significant differences in other areas of motivation. These results were situated in potential implications for students, professors, and programs as well as the need for follow-up studies.

Keywords

student learning, motivation, education, speech-language pathology

Introduction

One universal goal of college professors has been to fully understand and enhance students' motivation for learning. Motivation for learning has been well-researched in the field of psychology for many years. Self-Determination Theory (SDT; Ryan & Deci, 2000a, b; Deci & Ryan, 2008) is a popular motivation theory used in the areas of applied fields, including sports, education, and health care (Deci & Ryan, 2008). Several studies on student motivation have been performed in a variety of health care programs (e.g., Horowitz, 2010; Kusurkar, Ten Cate, Vos, Westers, & Croiset, 2013; Orsini, Binnie, Fuentes, Ledezma, & Jerez, 2016; Sobral, 2004); however, an extensive literature review revealed no published research studies that included the field of speech-language pathology (SLP). Developing a greater understanding of motivation in SLP students is particularly relevant because of the uniqueness of SLP training programs. There are certain characteristics of both undergraduate programs and graduate programs—for example, the competitive nature of graduate school acceptance, very high grade point average expectations, competitiveness for externship clinical placements, national examination requirements, and very high program retention requirements—that warrant researching motivation for learning in SLP students. The purpose of this pilot study was to begin to explore motivation for learning in SLP students at both the undergraduate and graduate levels. It is anticipated that this study's findings will be used to develop a line of research into motivation of learning in SLP students to better train and prepare the future of the profession.

Overview of Self-Determination Theory

Self-Determination Theory (Ryan & Deci, 2000a, b; Deci & Ryan, 2008) places primary importance of *type* of motivation, as opposed to *amount* of motivation. In this theory, motivation is classified as external, internal, and amotivation. SDT theory, however, classifies motivation within an additional first-order category, which consists of autonomous motivation and controlled motivation (see Figure 1 for a visual description). Autonomous motivation includes intrinsic motivation, as well as some components of external motivation. When students are autonomously motivated, "...they experience volition, or a self-endorsement of their actions" (Deci & Ryan, 2008, p. 182). Controlled motivation only includes aspects of extrinsic motivation, or when rewards, punishments, and avoidance of shame is the root of the motivation. Amotivation, in contrast to both autonomous and controlled motivation, occurs when there is no intention or motivation (Deci & Ryan, 2008).

Figure 1

Self-Determination Theory Continuum of Motivation (adapted from Ryan & Deci, 2000a, b; Deci & Ryan, 2008)

Intrinsic motivation. Intrinsic motivation refers to doing something because of one's level of interest or enjoyment, regardless of outcome (Ryan & Deci, 2000a, b). An example of intrinsic motivation would be a student who is taking a class because of his or her level of personal interest and enjoyment in learning the information. Intrinsic motivation is a critical component to the development of becoming a life-long learner, to explore, and subsequently gain knowledge and skills. Intrinsic motivation includes greater feelings of competence, autonomy and internally perceived locus of causality (Ryan & Deci, 2000a, b). Intrinsically motivated students find interest and satisfaction in the learning process itself (Harlen & Crick, 2003). Lei (2010) showed a positive correlation between intrinsic motivation and learning, achievement, and perceptions of self-efficacy. Intrinsic motivation has been related to higher grades (Hamilton Bailey & Phillips, 2015) and greater academic success (Sobral, 2004). Individuals who are intrinsically motivated often report feeling more satisfied with life and more positive affect, as well as fewer reports of negative affect (Hamilton Bailey & Phillips, 2015).

In order for students to become more intrinsically motivated, and therefore achieve autonomous motivation, three needs should be fulfilled—competence, autonomy, and relatedness (Ryan & Deci, 2000a, b). In SDT, competence is referred to as a *feeling* of competence, as opposed to demonstration of a certain level of competence. Competence, however, must act in accordance with a feeling of autonomy, or the sense that one's behavior is self-determined. SDT stresses the importance that for intrinsic motivation to occur, the task must be intrinsically interesting to the individual, meaning that the task must be novel, challenging, or have aesthetic value (Ryan & Deci, 2000b).

Extrinsic motivation. Extrinsic motivation refers to doing something because it leads to a particular outcome (Ryan & Deci, 2000a, b). Extrinsically motivated students engage in learning based on the expected receipt of a reward or punishment (Harlen & Crick, 2003). Extrinsic motivation, however, should not be considered as a negative. In fact, two of the four types of extrinsic motivation are a component of the more desirable autonomous learning. Extrinsic motivation is best viewed as a spectrum, containing four subtypes. At one end of the spectrum, the end closest to intrinsic motivation, is what SDT refers to as *integrated regulation*. Students with integrated regulation (external motivation with large amounts of autonomy) may be motivated to study because they see the value of the information as it relates to their future careers, but yet are completing the task because of a desired outcome. The second more-autonomous form of external motivation is *identification*. Identification still refers to completing a task for a desired outcome, but the student has identified the task to be personally important (Ryan & Deci, 2000a, b).

The final two forms of extrinsic motivation sit at the opposite end of the spectrum, closer to amotivation and are considered controlled motivation. These two forms include *introjected regulation* and *external regulation*. Introjected regulation occurs when a student's motivation exists to boost ego, pride, or avoid guilt or shame. Students with *external regulation* may attend class just so they don't get in trouble. This type of extrinsic motivation is the most controlled, and is the type of motivation associated with operant conditioning (Ryan & Deci, 2000a, b). Rewards have been shown to undermine intrinsic motivation, and should be well understood and used with caution (Deci, Koestner, & Ryan, 1999).

Students who are extrinsically motivated with little autonomy and more controlled extrinsic motivation may learn superficially and use less effective learning strategies (Harlen & Crick, 2003). These types of extrinsic motivation have not been shown to correlate with good grades (Hamilton Bailey & Phillips, 2015) or interest (Weber, 2003), and has been related to less academic achievement (Sobral, 2004). Moreover, students with external motivation may complete tasks with resentment, disinterest, or limited interest in the inherent value for learning the task (Ryan & Deci, 2000a, b). Lei (2010) identified additional drawbacks to extrinsic motivation including low self-esteem, high anxiety and depression, stress, and frustration, limited personal growth.

Motivation in Speech-Language Pathology Programs

Research has shown that motivation has an impact on academic achievement in other health related fields. Artino, La Rochelle, and Durning (2010) examined the relationship between motivational beliefs (task value and self-efficacy) and achievement emotions (enjoyment, anxiety, and boredom) and academic achievement, as measured by examination grades and a national board examination score in second-year medical students. Using survey data, the authors found moderate and educationally significant effects, with motivational beliefs and achievement emotions accounting for 20% of the variance in exam grades and 14% of the variance in the national board exam score. The authors discussed the importance of educators considering teaching practices and grading schemes that might increase positive achievement emotions.

In another study, Horowitz (2010) conducted semi-structured interviews with male pre-med students to better understand goal orientation and motivation in these students. As pre-med students, these participants were in highly competitive learning situations. Of the students interviewed, 94% stated that earning good grades was important. Almost all students reported choosing instructors or courses that were considered easy. When goal orientations were further analyzed, 61% were either primarily extrinsically motivated (13%) or a combination of extrinsically and intrinsically motivated (48%). Horowitz (2010) described these students' complex goal orientations as emotional wrestling, where students make compromises in their goal orientations and adapt their priorities as the situation dictates.

Students in undergraduate speech-language pathology (UG SLP) programs are also participants in a highly competitive learning environment. The necessity of graduate school acceptance, in addition to high institutional retention requirements set the stage for a unique learning environment. The discrepancy between UG enrollment and graduate school acceptance further supports the highly competitive nature of UG SLP programs. While certainly not the sole determiners of graduate school acceptance, considerable weight is placed on grade point average and scores on the Graduate Record Exam. Earning a grade, specifically an A or B, is likely a powerful motivator for UG SLP students. This external motivation, particularly in its most controlled form, is an ingrained component of UG SLP programs. There are no data, however, to support the hypothesis that UG SLP students are highly extrinsically motivated. This is a needed area of research, considering the previously discussed potential negative impact of less-autonomous types of extrinsic motivation on learning.

Graduate school, on the other hand, is a different learning environment than UG. Once students gain acceptance into graduate school, students begin balancing the rigorous academic and clinical

requirements, while simultaneously developing professional skills to prepare for entry into the profession. In an applied field such as SLP, students are taught to use foundational knowledge and flexibly apply that knowledge to clients—not to receive a grade, but to improve the quality of life in a human being. For many students, graduate school is the first time for independent clinical experiences. These clinical experiences have been shown to impact motivation. Orsini, Binnie, et al. (2016) considered motivation from pre-clinical versus post-clinical environments in the field of dental medicine. Their results showed that pre-clinical students showed a controlled motivation profile, while first-year clinical students were already showing a change to an autonomous motivation profile. This study also found that there was a simultaneous significant increase in amotivation during the first year. The authors suggested this may be due to the abrupt change from pre-clinical to clinical, causing feelings of inadequacy or maladjustment, resulting in students not being sure where to put their efforts. In other words, students were ready and eager to learn, but the transition was a stressful time for them. Speech-language pathology students undergo a similar transition from UG to graduate school, and the impact of the transition from UG to graduate school on motivation in SLP students is currently unknown.

Purpose of the Study

The primary purpose of this exploratory study was to attempt to gain a better understanding of SLP students' motivations for learning in order to continually improve educational practice and clinical training. The absence of research on motivation for learning in SLP students, the uniqueness of SLP programs at both the undergraduate and graduate levels, and the potential for SLP programs to foster external controlled motivation suggested this was an area of research that was sorely needed. This study used the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991) to begin to explore types and levels of motivation, as reported by the students and explore differences in motivation based on grade level (i.e., junior-level versus first-year graduate level). The specific research questions of this study were:

1. What were the motivations for learning of a group of junior-level and first-year graduate students enrolled in an SLP program?
2. Were there differences in the motivations for learning between the junior-level and first-year graduate students enrolled in an SLP program?

Method

Participants. The participants in this study represented a convenience sample of students enrolled in a CAA accredited SLP program in a public university in Midwestern United States. This sample included 44 junior-level students and 31 were first-year graduate students. Student participation was completely voluntary and the results did not contain identifying information to ensure anonymity. All participants were native English speaking and domestic United States students. On average, 98% of the juniors were characterized as millennials based on age and 93% of the graduate students were characterized as millennials. Both classes were 96% female on average.

Instrument and Procedure. The Motivated Strategies for Learning Questionnaire (MSLQ) “is a self-report instrument designed to assess college students’ motivational orientations and their use of different learning strategies for a college course” (Pintrich et al., 1991, p. 3). The MSLQ is commonly used in educational psychology research to assess students’ motivation in different

types of course content, in different populations, and in different types of instructional strategies and has been described as an “efficient, practical, and ecologically valid measure” (Garcia Duncan & McKeachie, 2005, p. 124). The MSLQ consists of 81 items scored on a Likert-type scale (1-not at all true of me to 7-very true of me). The self-report questionnaire is separated into two separate scales. The Motivation Scale has six sections containing 31 items, and the Learning Strategies Scale has nine sections composed of 50 items. Students were administered the MSLQ in its entirety in one class period during the first eight weeks of a fall and a spring semester, in a total of four classes (two undergraduate classes and two graduate classes). Specifically the students participated as follows: (a) the junior group completed the questionnaire in both the Anatomy/Physiology (fall) and Normal Language Acquisition (spring) courses and (b) the graduate group completed the questionnaire in both the Neurology (fall) and Aphasia/Motor Speech Disorders (spring) courses. Each group completed the questionnaire in two different classes which included one basic science-type and one clinical-type course. Because the MSLQ is specific to the class in which it is administered, one basic science-type course and one clinical-type course was purposely selected for each group to minimize potential impact of any learning differences due to course type.

Data Analysis. To answer the research questions specifically posed in this study, the six sections of the Motivation Scale were analyzed, including: (a) Intrinsic Goal Orientation (4 questions), (b) Extrinsic Goal Orientation (4 questions), (c) Task Value (6 questions), (d) Control of Learning Beliefs (4 questions), (e) Self-Efficacy for Learning and Performance (8 questions), and (f) Test Anxiety (5 questions). While the Intrinsic and Extrinsic Sections are self-explanatory, framed within SDT, Task Value provided information pertaining to the underlying foundation of intrinsic motivation, which is that tasks and activities must have intrinsic *interest* (Ryan & Deci, 2000a, b). Control of Learning Beliefs and Self-Efficacy for Learning and Performance provided information related to *competence* and *autonomy* (Ryan & Deci, 2000a, b). Test Anxiety provided information pertaining to the most controlled forms of extrinsic motivation--external and introjected regulation. See the Appendix for a specific description of these sections. Independent *t* tests were used to evaluate group differences between the two junior level classes and the two graduate level classes. Effect sizes were calculated using Cohen's *d*. All descriptive and inferential statistics were calculated using Microsoft Excel.

Results

The first research aim of this study was focused on the descriptive characteristics of motivation in the two junior level courses and the two graduate level courses and is represented in Table 1. Overall, across all six of the scales, all of the participants' ratings were greater than the value considered to be neutral (i.e., greater than 4 on the scale). Generally speaking, the participants' were highly intrinsically and extrinsically motivated, and also reported high levels of competence, autonomy, and interest. Supporting our hypothesis, the level of extrinsic motivation was very high, less than one scale point from the maximum category of 7 (*very true of me*). Test Anxiety was the lowest rating for both groups, with levels closest to the *neutral* rating of 4.

Table 1

Means, Standard Deviations, Inferential Results, and Effect Sizes for the Group Comparisons

	Junior-level Courses ^a		Graduate-level Courses ^b		
				<i>p</i> (2-tail)	<i>d</i>
Intrinsic Motivation					
Mean	5.18		5.48	.03	.36
Standard Deviation	.78		.83		
Extrinsic Motivation					
Mean	6.11		4.76	.000	1.39
Standard Deviation	.70		1.24		
Task Value					
Mean	6.06		6.04	.89	n/a
Standard Deviation	.72		.91		
Control of Learning Belief					
Mean	5.59		5.5	.56	n/a
Standard Deviation	1.21		1.37		
Self-Efficacy for Learning and Performance					
Mean	5.33		5.11	.17	n/a
Standard Deviation	1.17		1.3		
Test Anxiety					
Mean	4.44		4.42	.91	n/a
Standard Deviation	1.78		2.08		

^a Junior level courses included Anatomy and Physiology ($n = 42$) and Normal Language Acquisition ($n = 43$)

^b Graduate level courses included Neurology ($n = 24$) and Aphasia/Motor Speech Disorders ($n = 29$)

The second research aim posed of this study addressed potential group differences in the areas of motivation. Results are also presented in Table 1. The independent t test indicated that graduate students had a significantly higher ratings of Intrinsic Motivation than junior level students, $t(136) = -2.16$, $p = .03$, $d = .36$ (small to medium effect size); junior level students had a significantly higher rating of Extrinsic Motivation than graduate level students, $t(136) = 8.17$, $p = .000$, $d = 1.39$ (large effect size). There were no statistical differences between junior level students and graduate level students in regard to Task Value, Control of Learning Belief, Self-Efficacy for Learning and Performance, and Test Anxiety.

Discussion

This study, to these authors' knowledge, was the first to explore motivation in SLP students and compare motivation in UG versus graduate students. These results have important implications for students, professors, and SLP programs.

The extremely high ratings of extrinsic motivation, particularly at the UG level is potentially concerning and warrants further investigation. Due to the potentially negative impact of extrinsic motivation on learning, SLP educators and programs should be aware of these high levels of extrinsic motivation. Whereas high test anxiety ratings would suggest more controlled external motivation, the test anxiety ratings from this study were lower when compared to overall extrinsic motivation, possibly suggesting that these students were more autonomously extrinsically motivated. Additional research is needed to better understand the precise type of extrinsic motivation (i.e., controlled versus autonomous) the students reported, as well as determine the impact of this on learning.

It was encouraging however, to see the statistically significant decrease in extrinsic motivation at the graduate level, with test anxiety holding relatively steady. It is unknown what precisely caused this decrease. At the most basic level, maturation may have caused this decrease. However, there may be factors associated with the differences in UG and graduate education that also contributed to this decrease. For example, the inclusion of clinical experiences, the nature of the content, less competition, and smaller class size are all viable possibilities that warrant further investigation. The results from this study may provide some support for findings from Lin, McKeachie, and Kim (2003) in which moderate levels of extrinsic motivation with high levels of intrinsic motivation were positively related to higher course grades. Lin et al. (2003) reminds us that "...extrinsic motivation is not necessarily incompatible with intrinsic motivation" (p. 256). These findings were also consistent with the findings from Horowitz (2010), in which many students were categorized as simultaneously extrinsically motivated as well as mastery oriented.

An encouraging finding was the very high ratings of intrinsic motivation across both UG and graduate students. Students' high ratings of task value, autonomy, and competence also supported their reported intrinsic motivation for learning. To continue to foster intrinsic motivation for learning, research suggests that professors can (a) support autonomy through a variety of teaching methods including active learning, case studies, experiments, choices of learning methods, and facilitating student empowerment through transferring responsibility; (b) support competence by providing them with an optimal challenge, providing constructive feedback focused on the task, and providing timely feedback; and (c) support relatedness through group activities; demonstrating an approachable, encouraging, and happy personality; and get to know students and let them get to know you (Orsini, Evans, Binnie, Ledezma, & Fuentes, 2016; Orsini, Evans, & Jerez, 2015).

Although these discussion points are interesting and relevant to educational practice, the exploratory nature of this study prevents generalization due to small sample size, homogeneity of the sample population, potential impact of individual professor, and selection of courses used in the analysis. Future research in this area is sorely needed, and some pressing areas involve exploring the timing of the introduction of clinical experiences and effects on motivation; performing a longitudinal investigation of individual student motivation over time; determining the impact of professor characteristics and practices on motivation; exploring how certain personality traits, such as perfectionism, impact motivation; exploring relationships between motivation and academic and clinical achievement; and exploring possible relationships between UG motivation and success in graduate school. Finally, this study only used one measure of motivation. Follow-up studies may consider using alternative scales or qualitative methodology to further study motivation for

learning. Despite the limitations of this pilot study, we anticipate that it will serve as a foundation for future research in SLP students' motivation for learning.

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Appendix*Description of the MSLQ Sections Analyzed*

Section	Description and Corresponding Questions
Intrinsic Goal Orientation (IG)	“Intrinsic goal orientation concerns the degree to which the student perceives herself to be participating in a task for reasons such as challenge, curiosity, mastery. Having an intrinsic goal orientation towards an academic task indicates that the student's participation in the task is an end all to itself, rather than participation being a means to an end” (Pintrich et al., 1991, p. 9).
Extrinsic Goal Orientation (EG)	“Extrinsic goal orientation complements intrinsic goal orientation, and concerns the degree to which the student perceives herself to be participating in a task for reasons such as grades, rewards, performance, evaluation by others, and competition. When one is high in extrinsic goal orientation, engaging in a learning task is the means to an end. The main concern the student has is related to issues that are not directly related to participating in the task itself (such as grades, rewards, comparing one's performance to that of others). Again, this refers to the general orientation to the course as a whole” (p. 10).
Task Value (TV)	“Task value differs from goal orientation in that task value refers to the student's evaluation of how interesting, how important, and how useful the task is (“What do I think of this task?”). Goal orientation refers to the reasons <u>why</u> , the student is participating in the task (“Why am I doing this?”). High task value should lead to more involvement in one's learning. On the MSLQ, task value refers to students' perceptions of the course material in terms of interest, importance, and utility” (p. 11).
Control of Learning Beliefs (CLB)	“Control of learning refers to students' beliefs that their efforts to learn will result in positive outcomes. It concerns the belief that outcomes are contingent on one's own effort, in contrast to external factors such as the teacher. If students believe that their efforts to study make a difference in their learning, they should be more likely to study more strategically and effectively. That is, if the student feels that she can control her academic performance, she is more likely to put forth what is needed strategically to effect the desired changes” (p. 12)
Self-Efficacy for Learning and	“The items comprising this scale assess two aspects of expectancy: expectancy for success and self-efficacy. Expectancy for success refers to performance expectations, and relates specifically to task performance. Self-efficacy is a self-appraisal of one's ability to master a task. Self-efficacy includes judgments about

Performance (SELP)	one's ability to accomplish a task as well as one's confidence in one's skills to perform that task" (p. 13).
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Test Anxiety	Test anxiety has been found to be negatively related to expectancies as well as academic performance. Test anxiety is thought to have two components: a worry, or cognitive component, and an emotionality component. The worry component refers to students' negative thoughts that disrupt performance, while the emotionality component refers to affective and physiological arousal aspects of anxiety. Cognitive concern and preoccupation with performance have been found to be the greatest sources of performance decrement. Training in the use of effective learning strategies and test-taking skills should help reduce the degree of anxiety" (p. 15).
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